



## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Kevin J. Knopp et al.

Serial No.:

10/758.343 01/15/2004

Filing Date: Title:

MONOLITHIC SEMICONDUCTOR LIGHT

SOURCE WITH SPECTRAL

CONTROLLABILITY

**Group Art Unit:** 

2883

Examiner: Attorney's Docket No.: Ryan A. Lepisto

AHURA-3

FOR PATENTS, PO BOX 1450, ALEXANDRIA, VA 22313-1450, ON: April 20, 2006

I HEREBY CERTIFY THAT THIS CORRESPONDENCE IS BEING DEPOSITED WITH THE UNITED STATES POSTAL SERVICE AS FIRST CLASS MAIL,

POSTAGE PREPAID, IN AN ENVELOPE ADDRESSED TO: COMMISSIONER

(DATE OF DEPOSIT)

Mail Stop Amendment Commissioner for Patents

PO Box 1450

Alexandria, VA 22313-1450

Sir:

pril 20, 2006

(DATE OF SIGNATURE)

## INFORMATION DISCLOSURE STATEMENT

Pursuant to 37 CFR 1.56, 1.97 and 1.98, Applicants hereby submit documents and information which may be considered material to the examination of this application. These documents and information are listed on the accompanying forms.

Copies of documents 1-7, which are listed on the accompanying form, PTO/SB/08A (one page), have not been submitted since submission of copies of U.S. patents and U.S. patent applications is no longer required under 37 CFR 1.98.

Copies of documents 8-23, which are listed on PTO/SB/08B (two pages), are enclosed herewith.

The enclosed documents may have markings thereon. Applicants are not presently aware of the source of those markings, and no significance is meant to be attached thereto.

Applicants respectfully request that these documents be fully considered by the U.S. Patent and Trademark Office during the examination of this application and printed on any patent which may issue on this application. Applicants also respectfully request that a copy of PTO/SB/08A (one page) and PTO/SB/08B (two pages), submitted

AHURA-3

180.00

herewith, as considered and initialed by the Examiner, be returned to the undersigned with the next communication.

It is believed that this disclosure complies with the requirements of 37 CFR 1.56, 1.97 and 1.98. If for any reason the Examiner considers otherwise, it is respectfully requested that the undersigned be contacted by the Examiner by telephone in order that any deficiencies may be expeditiously remedied.

A check in the amount of One Hundred Eighty Dollars (\$180.00) payable to the Commissioner of Patents and Trademarks also is enclosed herewith to cover the fee due in connection with this submission. Please charge any additional fees due in connection with this submission, or credit any overpayment, to Deposit Account No. 16-0221. A duplicate copy of this submission is enclosed for the convenience of the Examiner.

Thank you.

Respectfully submitted

Margaret M. Slezak, Esq. Registration No. 55,625 Pandiscio & Pandiscio, P.C. 470 Totten Pond Road

Waltham, MA 02154 Tel. (617) 290-0060

KB/AHURA3.IDS

PTO/SB/08A (08-03) Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE perwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

situte for form 1449/PTO

Sheet 1

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

of 1

Complete if Known				
Application Number	10/758,343			
Filing Date	01/15/2004			
First Named Inventor	Kevin J. Knopp			
Art Unit	2883			
Examiner Name	Lepisto, Ryan A.			
Attorney Docket Number	AHURA-3			

			U. S. PATEN	DOCUMENTS	-
Examiner Initials*	Cite No. <sup>1</sup>	Document Number  Number-Kind Code <sup>2 (# known)</sup>	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	<sup>US-</sup> 6,542,287	04-01-2003	Ye et al.	
	2	<sup>US-</sup> 6,693,740	2-17-2004	Gray et al.	
	3	<sup>US-</sup> 6,731,426	08-29-2002	Yeniay et al.	
	4	<sup>US-</sup> 6,212,310	04-03-2001	Waarts et al.	
	5	<sup>US-</sup> 6,522,465	02-18-2003	Goldstein	
	6	<sup>US-</sup> 6,697,558	02-24-2004	Hansen et al.	
	7	<sup>US-</sup> 6,292,288	09-18-2001	Akaska et al.	
		US-			,
· · · · · · · · · · · · · · · · · · ·		US-			
		US-			

	FOREIGN PATENT DOCUMENTS							
Examiner Initials*	Cite No.1	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages			
		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)	MM-DD-YYYY		Or Relevant Figures Appear	T <sup>6</sup>		
				<u> </u>	1	í I		

Examiner	Date	1
	Date	t .
Signature	Considered	
- 1	Considered	

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. Applicant's unique citation designation number (optional). See Kinds Codes of USPTO Patent Documents at <a href="https://www.uspto.gov">www.uspto.gov</a> or MPEP 901.04. Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. Applicant is to place a check mark here if English language Translation is attached.

Trainstation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND

TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paper ork Reduction Act 21995, no persons of recent to the Paper of the P

PTO/SB/08B (08-03)
Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE required to respond to a collection of information unless it contains a valid OMB control number.

	Complete if Known	
Application Number	10/758,343	
Filing Date	01/15/2004	
First Named Inventor	Kevin J. Knopp	
Art Unit	2883	
Examiner Name	Lepisto, Ryan A.	
Attorney Docket Number	AHURA-3	

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 2 of 3

	I 6::	NON PATENT LITERATURE DOCUMENTS	,
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	8	KIDORF et al., Pump Interactions in a 100-nm Bandwidth Raman Amplifier, IEEE Photonics Technology Letters, May 1999, 530-32, 11(5).	
	9	GARBUZOV et al., 14xx nm DFB InGaAsP/InP Pump Lasers with 500 mW CW Output Power for WDM Combining, Optical Fiber Communications Conference, 2002, Anaheim, CA.	
	10	TSUKIJI et al., Recent Progress of High Power 14XX nm Pump Lasers, SPIE ITcom on Active and Passive Optical Components for WDM Communication, 2001, Denver, CO.	
	11	OKAMOTO, Fundamentals of Optical Waveguides, 2000, Academic Press, San Diego.	
	12	HOLONYAK, Impurity-Induced Layer Disordering of Quantum-Well Heterostructures: Discovery and Prospects, IEEE Journal of Selected Topics in Quantum Electronics, July/August 1998, 584-594, 4(4).	
	13	KUDO et al., 1.55 um Wavelength-Selectable Microarray DFB-LD's with Monolithically Integrated MMI Combiner, SOA, and EA-Modulater, IEEE Photonics Technology Letters, March 2000, 12 (3).	
	14	HAMAMOTO et al., High Power with Low Electric Power Consumption 1.45 um Active Multi-Mode Interferometer Laser Diode for Fiber Amplifier Applications, Optical Fiber Communications Conference, 2002, Anaheim, CA.	
	15	SOLDANO et al., Optical Multi-Mode Interference Devices Based on Self-Imaging: Principles and Applications, Journal of Lightwave Technology, April 1995, 615-627, 13(4).	
	16	SI et al., Area Selectivity of InGaAsP-InP Multiquantum-Well Intermixing by Impurity-Free Vacancy Diffusion, IEEE Journal of Selected Topics in Quantum Electronics, July/August 1998, 619-623, 4(4).	
	17	PAQUETTE et al., Blueshifting of InGaAsP-InP Laser Diodes Using a Low Energy Ion-Implantation Technique: Comparison Between Strained and Lattice-Matched Quantum-Well Structures, IEEE Journal of Selected Topics in Quantum Electronics, July/August 1998, 741-745, 4(4).	

Examiner	Date	
Signature	Considered	

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO:

Substitute for form 1449/PTO		Complete if Known			
Substitute for form 1993/19		Application Number	10/758,343		
INF	ORMATION	I DIS	CLOSURE	Filing Date	01/15/2004
STATEMENT BY APPLICANT			PPLICANT	First Named Inventor	Kevin J. Knopp
				Art Unit	2883
(Use as many sheets as necessary)		Examiner Name	Lepisto, Ryan A.		
Sheet	3	of	3	Attorney Docket Number	AHURA-3

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
,	18	YU et al., Semiconductor Lasers Using Diffused Quantum-Well Structures, IEEE Journal of Selected Topics in Quantum Electronics, July/August 1998, 723-735, 4(4).	
	19	CHO et al., 90 mW CW Superluminescent Output Power from Single-Angled Facet-Ridge Waveguide at 1.5 um, Trends in Optics and Photonics Series, 2001, 31.	
	20	AGRAWAL et al., Nonlinear Fiber Optics, 1989, Ch.8, Academic Press.	
	21	KOCH et al., Broadband Raman Gain Characterisation in Various Optical Fibers, Electronics Letters, 11/22/2001, 1437-1439, 37(24).	
	22	MATSUSHITA et al., Design of Temperature Insensitive Depolarizer for Raman Pump Laser Diode, OSA Technical Digest, OFC2002, WB3.	
	23	FLUDGER et al., Pump to Signal RIN Transfer in Raman Fiber Amplifiers, Journal of Lightwave Technology, August 2001, 1140-1148, 19(8).	

Examiner	 Date	
Signature	Considered	

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.